

In Re Patent Application of:
NELSON ET AL.
Serial No. 10/734,842
Filing Date: DECEMBER 12, 2003

REMARKS

Applicants thank the Examiner for the thorough examination of the present application. Claims 51-59 are canceled without prejudice, and Claims 37-50 remain pending in the present application.

As requested by the Examiner, the title of the invention has been revised to "Method for making Coaxial Cable Jumper Assembly including Plated Outer Conductor." Additionally, the claims have been amended to overcome several of the Examiner's indefinite rejections. The remaining indefinite and prior art rejections are addressed in detail below. For the reasons set forth below, Applicants assert that all of the claims are patentable.

I. The Claimed Invention

The present invention is directed to a method for making a coaxial cable jumper assembly. The method includes forming a jumper coaxial cable comprising an inner conductor, a dielectric layer surrounding the inner conductor, and an outer conductor surrounding the dielectric layer. The outer conductor includes an aluminum layer and a tin layer thereon. The method further comprises soldering at least one connector to the tin layer adjacent at least one respective end of the jumper coaxial cable.

II. The Drawings Show Every Feature of the Claimed Invention

The Examiner objects to the specification drawings, contending that they do not illustrate the "first and second

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connectors" and "first and second ends of the coaxial jumper cable" as recited in Claim 50. However, FIG. 2 clearly illustrates connectors 40 at either end of coaxial jumper cable 25 (See page 8, lines 23-25 of the specification). Applicants respectively request that the Examiner withdraw this objection.

III. The Claims Are Definite

The Examiner contends that independent Claim 37 does not particularly point out and distinctly claim the soldering step, as it does not include a step of stripping back an outer conductor jacket prior to soldering. However, the invention as set forth in independent Claim 37 does not require an outer protective plastic layer, and therefore the cutting or stripping of such an outer protective plastic layer is also not required. Referring to page 8, lines 20-22 and FIGS. 3-4 of the present application, the outer protective plastic layer is optional. Accordingly, independent Claim 37 does particularly point out and distinctly claim the soldering step, and is complete.

The Examiner further contends that Claims 45-50 have no connection with independent Claim 37. However, the Examiner's assertion is puzzling, as each of Claims 45-50 specifically refer to the step of soldering recited by independent Claim 37.

Accordingly, it is submitted that the claims comply

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with the requirements of 35 USC 112, 2nd paragraph, and Applicants respectfully request that the Examiner withdraw these rejections.

IV. The Claims Are Patentable

The Examiner rejected independent Claim 37 over Leibfried, Jr. (U.S. Patent No. 5,232,377) in view of Cooke et al. (U.S. Patent No. 4,169,770). In view of the arguments set forth below, Applicants maintain that independent Claim 37 is patentable over the cited references.

The Leibfried Jr. patent is directed to a semi-rigid coaxial cable having an inner conductor, insulative jacket and outer conductor, where a solder joint is formed between a portion of the outer conductor and a connector outer shell. The Examiner correctly notes that Leibfried, Jr. fails to disclose an outer conductor with a tin layer thereon. The Examiner contends that Cooke et al. discloses such, and points to Col. 1, lines 6-22 for the teaching and motivation to modify Leibfried, Jr. to include an outer conductor for a coaxial cable comprising an aluminum layer and a tin layer thereon.

The Cooke et al. patent discloses a process for electroplating aluminum stock, such as strip, rod, or wire. More specifically, the Cooke et al. patent discloses that a surface of the aluminum must first be electrolytically cleaned by passing current from the aluminum to a cathode through an aqueous solution of caustic alkali under specific conditions of concentration, time, temperature, voltage, and current

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density. The aluminum is then subjected to electroplating by passing current from the plating metal to the aluminum from a bath with agitation. The aluminum may be plated with tin, brass, zinc, lead, nickel, or copper, as disclosed in Cooke et al. (column 5, lines 28-40). The Cooke et al. patent does not include any discussion of coaxial cables or the soldering thereof.

Applicants submit that there is no proper motivation to combine the references in the manner set forth by the Examiner. Absent the Applicants' disclosure, one of ordinary skill in the art would not look to selectively modify the coaxial cable disclosed in the Leibfried, Jr. patent, with a specific combination of materials selectively chosen from the laundry list of materials disclosed in the Cooke et al. patent along with the particular process for electroplating disclosed in the Cooke et al. patent. Instead, the Examiner is using improper hindsight reconstruction based upon the teachings of Applicants' specification to assemble the disjoint pieces of the prior art. It is therefore submitted that there is simply no proper teaching or suggestion in the prior art to combine the Leibfried, Jr. patent with the Cooke et al. patent in the manner set forth by the Examiner.

The Examiner further contends that tin or aluminum are well known materials, and it would be obvious to choose "any desired conductive layer materials for outer conductive layer." However, the Examiner disregards Applicants' specification, indicating that not all materials, including aluminum, readily accept solder (Page 3, lines 14-21).

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Serial No. 10/734,842
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Furthermore, page 8, lines 7-16 of the specification contrasts the advantages of using an outer conductor including an aluminum layer and a tin layer thereon, with the disadvantages of using an outer conductor including an aluminum layer without such a tin layer. Indeed, it is the Applicants who invented a jumper coaxial cable including an outer conductor having an aluminum layer with a tin layer thereon. None of the prior art references, alone or in combination, provide a teaching for a coaxial cable outer conductor including an aluminum layer with a tin layer thereon.


Accordingly, Applicants submit that independent Claim 37 is patentable. Its respective dependent claims, which recite yet further distinguishing features, are also patentable, and require no further discussion herein.

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CONCLUSION

In view of the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



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In Re Patent Application of:
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